

## Cycolac\* Resin Z48

Americas: COMMERCIAL

Automotive. Very high heat resistance with medium impact and good strength properties.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	46	MPa	ASTM D 638
Tensile Modulus, 5 mm/min	2270	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	82	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2410	MPa	ASTM D 790
Hardness, Rockwell R	110	-	ASTM D 785
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	213	J/m	ASTM D 256
Izod Impact, notched, -40°C	53	J/m	ASTM D 256
Gardner, 23°C	12	J	ASTM D 3029
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	110	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	113	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	103	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.92E-05	1/°C	ASTM E 831
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.05	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 230°C/3.8 kgf	1	g/10 min	ASTM D 1238
Melt Viscosity, 260°C, 1000 sec-1	2550	poise	ASTM D 3825

Source GMD, last updated:12/29/1999

### Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	95 - 100	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.01	%
Melt Temperature	245 - 275	°C
Nozzle Temperature	245 - 275	°C
Front - Zone 3 Temperature	245 - 255	°C
Middle - Zone 2 Temperature	225 - 240	°C
Rear - Zone 1 Temperature	200 - 210	°C
Mold Temperature	50 - 80	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	30 - 60	rpm
Shot to Cylinder Size	50 - 70	%
Vent Depth	0.038 - 0.051	mm

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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